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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

04 OCT 2004

Applicant's or agent's file reference <b>P 2006 PC 00</b>	<b>FOR FURTHER ACTION</b> See Form PCT/IPEA/416																									
International application No. <b>PCT/NO 2003/000108</b>	International filing date (day/month/year) <b>03-04-2003</b>	Priority date (day/month/year) <b>04-04-2002</b>																								
International Patent Classification (IPC) or national classification and IPC <b>G05D 1/02, H04B 5/00</b>																										
Applicant <b>NATIONAL OILWELL NORWAYS et al</b>																										
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>4</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u>2</u> sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> <p>4. This report contains indications relating to the following items:</p> <table border="0"> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>			<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
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Date of submission of the demand <b>29-09-2003</b>	Date of completion of this report <b>14-06-2004</b>																									
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Form PCT/IPEA/409 (cover sheet) (January 2004)

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# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International Application No.

PCT/NO 2003/000108

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☒ This report is based on a translation from the original language into the following language english, which is the language of a translation furnished for the purposes of:

- ☐ international search (under Rules 12.3 and 23.1(b))  
☒ publication of the international application (under Rule 12.4)  
☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☐ the international application as originally filed/furnished

☒ the description:

pages 1-6 as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☒ the claims:

pages \_\_\_\_\_ as originally filed/furnished

pages\* \_\_\_\_\_ as amended (together with any statement) under Article 19

pages\* 1-2 received by this Authority on 26.04.2004

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☒ the drawings:

pages 1-3 as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages \_\_\_\_\_

☐ the claims, Nos. \_\_\_\_\_

☐ the drawings, sheets/figs \_\_\_\_\_

☐ the sequence listing (*specify*): \_\_\_\_\_

☐ any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages \_\_\_\_\_

☐ the claims, Nos. \_\_\_\_\_

☐ the drawings, sheets/figs \_\_\_\_\_

☐ the sequence listing (*specify*): \_\_\_\_\_

☐ any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/NO 2003/000108

**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims	<u>1-5</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-5</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-5</u>	YES
	Claims		NO

**2. Citations and explanations (Rule 70.7)**

## Documents cited in the International Search Report:

- A) WO 9826517 A (G.Michot), 18 June 1998
- B) US 5513854 A (G.J.G.Daver), 7 May 1996
- C) US 5225809 A (C.G.Bunn), 6 July 1993
- D) WO 9838554 A1 (Siemens Aktiengesellschaft), 3 Sept 1998
- E) JP 63107235 A1 (Nidec NEC Corp), 15 May 1988
- F) FR 2382886 A1 (E.Cochard), 6 October 1978
- G) JP 7131392 A (Fujitsu Ltd), 19 May 1995
- H) US 4025922 A (J.C.Trawick III), 24 May 1977
- I) JP 3245130 B2 (Mirai Gijutsu Kenkyusho KK), 7 Jan 2002
- J) GB 1543910 A (The Plessey Comp. Ltd), 11 April 1979

In a view of new claims, amended at 29-04-2004, documents A - C are reconsidered to represent the state of the art, together with remaining documents D-J.

Document A discloses a system for location of a sports player where a plurality of transponder modules, each including a transmitter and a receiver powered by an electronics circuit, are arranged at ground level on which persons move. A transponder is also mounted in the heel of the player's boot to activate the transponder modules to transmit information about the position of the player to a remote location. Position of the players can be shown by means of screen picture and transponders can alternatively be placed at the ankle of the players. The system can also be used for establishing the location of the blind people. (See page 3, line 29-page 6, line 7; fig. 1).

.../...

## Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box V

Document B discloses a system for detecting position of moving persons e.g. in team sports. The system comprises acquisition devices used to acquire the position of the players consisting of, on the one hand, a set of radio frequency transmitters carried by players and, on the other hand, a set of radio frequency antennas arranged in the area and responsible for receiving the radio signals from the transmitters. The signals are transmitted to a central acquisition unit and processed to produce player's positions. (See column 4, line 28-column 5, line 17).

Document C discloses a method and a system for locating of persons, where the persons are provided with transmitters capable of transmitting signals to a number of antennas/transmitters arranged in a geographical area, which transmit signals to a central processing equipment. Output signal is then processed representing the position of the personal transmitter in the geographical area. (See column 4, line 20-column 5, line 22).

However, none of the cited documents discloses a device and a method for locating persons in a working range of a machine and preventing people from becoming exposed to injury from the machine, where the machine is stopped if the person is located within the working area of the machine.

In view of the cited documents such a method and a device cannot be considered obvious to a person skilled in the art.

Therefore the invention claimed in claims 1 - 5 is novel and considered to involve an inventive step.

The claimed invention is regarded to be industrially applicable.

## C l a i m s

1. A method to prevent that a person (10), that is located within a machine's (18) working area (5), is subjected to an injury from the machine (18), in that a transceiver (8) connected to the person (10) activates one or several identifiable transponders (6) placed in the area (5), after which the activated transponder(s) (6) emit an identifiable signal onto a main receiver/-transmitter (14), each of the received signals then being referred to a known position, characterised in that the machine (18) is stopped if the person (10) is located within the working area (5) of the machine (18).

2. A method according to claim 1, characterised in that an operator (20) is shown positions of persons (10) located on, for example, a drill floor (2), by means of, for example, a screen picture.

3. A device to prevent that a person (10), that is located within a machine's (18) working area (5), is subjected to an injury from the machine (18), in that a transceiver (8) connected to the person (10) activates one or several identifiable transponders (6) placed in the area (5), after which the activated transponder(s) (6) emit an identifiable signal onto a main receiver/-transmitter (14), each of the received signals then being referred to a known position, characterised in that the machine (18) is adapted to stop if the person (10) is located within the working area (5) of the machine (18).

4. A device according to claims 3, c h a r a c t e r i s e d  
i n t h a t t h e f o o t t r a n s c e i v e r ( 8 ) i s p l a c e d i n t h e s h o e  
s o l e ( 1 2 ) o f t h e p e r s o n ( 1 0 ) .

5 5. A device according to claims 3 or 4, c h a r a c t e r -  
i s e d i n t h a t t h e f o o t t r a n s c e i v e r ( 8 ) i s p l a c e d a t  
t h e a n k l e o f t h e p e r s o n ( 1 0 ) .